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LEVERAGING TECHNOLOGY, TRADE, AND INTEGRATION

Turning promise to shared prosperity

MAKING AFRICA'S INTEGRATION WORK FOR JOBS, SCALE, AND STRUCTURAL CHANGE

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Africa's regional integration is now an urgent operational priority. With one million young Africans entering the labor force every month,[1] no strategy better addresses the continent's employment challenge than integration. It is Africa's key to unlock industrialization, scale up productivity, and create quality jobs for the growing youth population.

Sectors where intra-Africa trade is already strong—agro-processing, logistics, light manufacturing, and transport equipment—represent emerging, labor-intensive regional value chains that offer the opportunity for meeting expanding regional demand with local production.[2] Integration in these sectors provides a pathway to grow market size; enable firms to scale, formalize, and hire; as well as lower entry barriers for informal traders through inclusive trade corridors.

Yet despite high-level political commitments, Africa's integration remains fragmented. Only 100 of the African Continental Free Trade Area's (AfCFTA's) 4,500 tariff-line products are actively traded under its preferences.[3] Meanwhile, global shifts, strategic decoupling, climate-linked trade regulations, and friend-shoring are reshaping global trade dynamics. This essay outlines four interlocking pillars to make integration work: (1) build regional production networks, (2) reduce trade frictions, (3) reboot trade agreements, and (4) deliver regional public goods for lasting impact.

From fragmentation to regional production networks

Integration is Africa's key to unlock industrialization, scale up productivity, and create quality jobs for the growing youth population.

Africa's trade structure reveals a productivity challenge: exports are dominated by raw materials and low-complexity goods. Participation in global value chains remains limited and is

1 Declan Walsh, "The World Is Becoming More African," *The New York Times*, November 13, 2023.

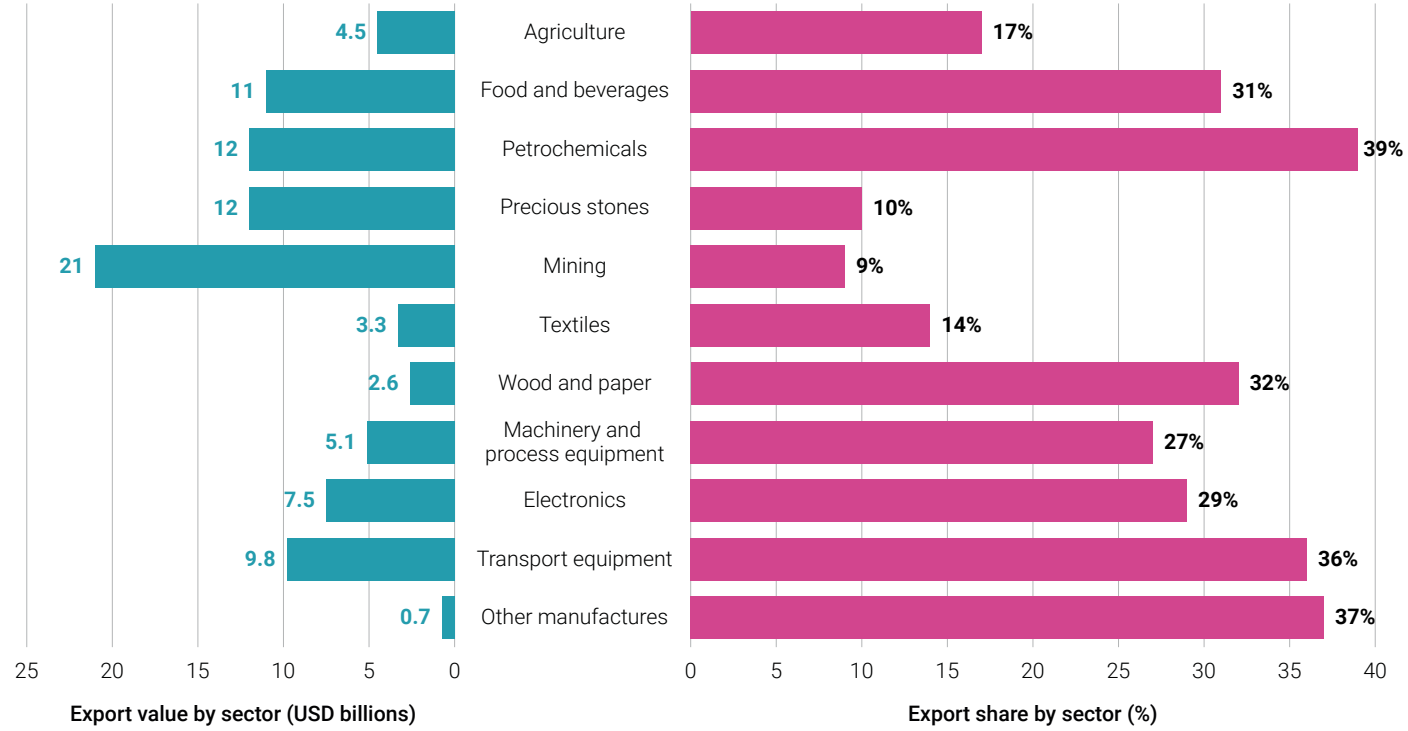
2 Signé, Landry, and Chido Munyati, AfCFTA: A new era for global business and investment in Africa, World Economic Forum, 2023.

3 "Tracking Africa's Progress on AfCFTA," UNECA, March 20, 2023.

FIGURE 25

Intra-African exports (value and shares) by sector

Value of intra-African exports in billions of USD (left) and share of sector that is traded within Africa (right)



Source: Kassa et al 2026 (forthcoming)

predominantly through forward linkages (i.e. as inputs to other industries), mostly in extractives and raw materials, with minimal domestic processing or learning effects.[4] Meanwhile, limited backward integration reflects weak industrial linkages and learning. Without a shift toward capability-based production, the continent risks remaining trapped in low-wage, high-risk commodity dependence.

Regional integration enables export diversification by aggregating scale and capabilities across borders. While individual African countries have limited export opportunity, regional blocks such as the Economic Community of West African States (ECOWAS) or the Southern African Development Community (SADC) reveal a higher density of feasible sectors. This finding underscores a core insight of an upcoming World Bank report[5] on Africa's integration: Regional markets are not just larger; they are structurally more conducive for industrial upgrading.

Intra-African trade centers on labor-intensive, value-added goods like processed food and light manufacturing (see Figure 25 above), which have high employment potential but limited global export share. "Small push" sectors (e.g., textiles) can easily scale within the region, while "big push" sectors (e.g., pharmaceuticals) need coordinated investment. Regional specialization, SADC in chemicals, ECOWAS in food, the Arab Maghreb Union in machinery, show that integration can foster complementary value chain hubs rather than competition.

Regional production networks in Africa are still nascent, but early signals are promising. In South Africa, a growing automotive cluster supplies components across the region, bolstered by multinational investment and government incentives.[6] The Zambia–DRC Battery Corridor, backed by the World Bank and other MDBs, links mineral reserves with regional processing and EV battery

4 Albert G. Zeufack et al., *Africa's Pulse*, No. 25, April 2022 (World Bank, 2022).

5 Woubet Kassa et al., *Integrating Africa: From Threads to Hubs* (World Bank Group, 2026), Forthcoming.

6 U.N. Economic Commission for Africa, *ECA Support Namibia and Lesotho to Review an Automotive Policy Framework to Integrate into the Regional Value Chain*, April 8, 2025.

manufacturing.[7] Kenya and Tanzania have also begun integrating cross-border agro-processing and packaging industries, aided by EAC regulatory harmonization and corridor upgrades.[8] These are early signals of potential, but robust regional value chains (RVCs) will depend on stronger coordination, infrastructure, and policy alignment.

Integration via regional production offers Africa a credible path to large-scale industrialization.

Integration via regional production offers Africa a credible path to large-scale industrialization. Countries must focus not just on what they produce, but how to integrate and grow within regional ecosystems.

Fixing the frictions: Trade costs, corridors, and regulatory hurdles

Within Africa, regional integration remains constrained not by tariffs, which have fallen significantly, but by high and persistent trade costs driven by regulatory fragmentation, infrastructure gaps, and institutional weaknesses.[9] Neighboring countries in Africa can be as "economically distant" as countries separated by oceans. This economic separation undermines the potential for RVCs by inflating the cost of moving goods, services, and people across borders.

The sources of these frictions are well known but persist due to a lack of policy coordination and enforcement. Transport markets are fragmented by restrictive bilateral permit systems, inconsistent axle-load rules, and cargo-sharing quotas that deter efficiency and competition. In the ECOWAS region, for example, opaque permitting systems and national trucking quotas limit the emergence of regional logistics markets.[10] In the Central Africa corridor between Douala and Ndjamena, clearance times and logistics costs are very high, and the roads remain among the worst in the world.[11] Corridors are vital to regional trade but often lack strong governance. Most rely on non-binding MoUs, with no legal authority or funding, making them dependent on political will.

Digitization can be a transformative tool. Digital tools like the Regional Electronic Cargo Tracking System (RECTS) and the Single Customs Territory in East Africa have cut Mombasa–Kigali transit from 21 to 7 days,[12] while the Interconnected System for the Management of Goods in Transit (SIGMAT) in West Africa slashed border clearance times.[13] However, such systems remain limited in scale, leaving many corridors without digital integration or data-sharing. This inaction disproportionately harms landlocked and smaller economies reliant on efficient trade routes.

To address these frictions, a clear and actionable policy agenda should:

- *Harmonize regulatory frameworks* across transport, customs, and border procedures either through AfCFTA Phase II protocols or Regional Economic Community (REC)-level agreements.
- *Empower corridor authorities* with legally binding mandates, operational funding, and enforcement mechanisms to govern multi-country infrastructure and logistics.
- *Scale up digital platforms* like RECTS, SIGMAT, and electronic single windows to enable real-time cargo tracking, paperless clearance, and regional data-sharing.
- *Transition to multilateral transport regimes*, replacing bilateral trucking permits with region-wide licensing and competition frameworks.
- *Link "hard" infrastructure investments to "soft" reforms* by conditioning financing on regulatory harmonization and performance metrics. Addressing these "soft" barriers will make Africa's hard infrastructure work for trade and transformation.

7 Silas Olan'g and Thomas Scurfield, "The DRC-Zambia Battery Plant: Key Considerations for Governments in 2024," *National Resource Governance Institute*, December 20, 2023.

8 East African Community, *EAC Vision 2050: Regional Vision for Socio-Economic Transformation and Development* (2016).

9 United Nations Trade and Development, *2024 Economic Development in Africa Report: Unlocking Africa's Trade Potential: Boosting Regional Markets and Reducing Risks* (United Nations, 2025).

10 Olivier Hartman and Niina Kaori, "Transport and the AfCFTA: Road Services as the Missing Link," *Africa Transport Policy Program*, August 28, 2025.

11 Alexandre Larouche-Maltais, "Why Is the Transit of Goods so Expensive in Central Africa?," *UNCTAD*, June 7, 2022.

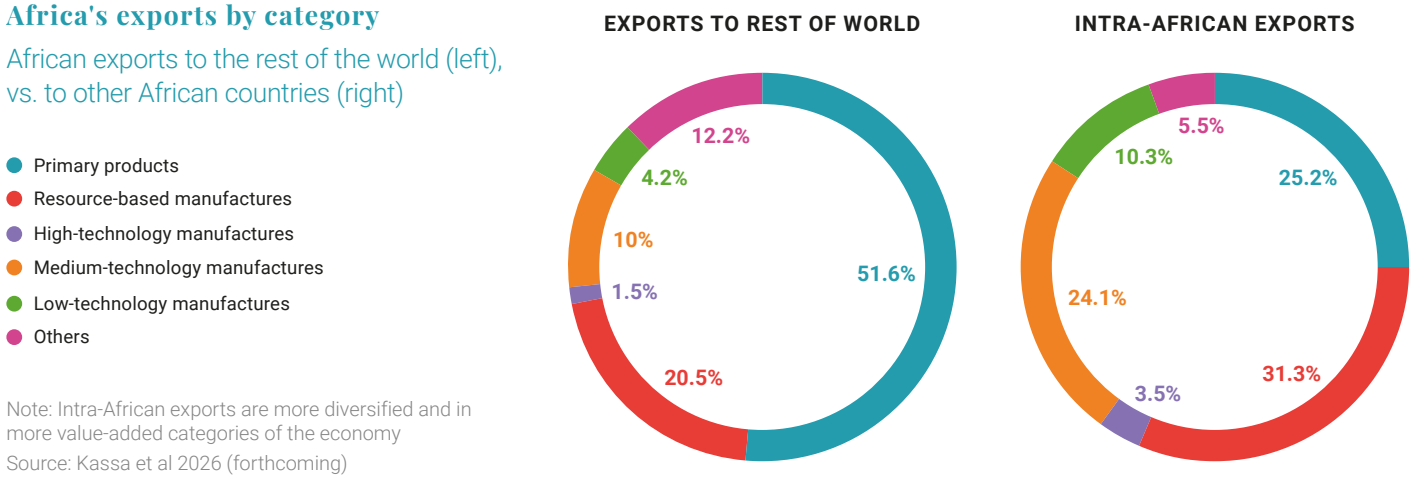
12 "Single Customs Territory," East African Community, https://www.eac.int/customs/single-customs-territory.

13 United Nations Conference on Trade and Development, *The SIGMAT System The ASYCUDA Journey in West Africa: Facilitating Cross-Border Transit Trade*, INF/2022/1 (UNCTAD, 2022).

FIGURE 26

Africa's exports by category

African exports to the rest of the world (left), vs. to other African countries (right)



Note: Intra-African exports are more diversified and in more value-added categories of the economy

Source: Kassa et al 2026 (forthcoming)

Rebooting trade agreements for regional growth and transformation

While the AfCFTA is a landmark achievement, its real impact hinges on transforming how African firms trade, invest, and compete, not just on formalities like signatures or tariff reductions. The key challenge is to deepen and enforce Africa's existing trade agreements, which are currently very shallow compared to other regions.[14] Although 90% of goods are tariff-free in principle, critical legal frameworks in services, investment, and intellectual property remain incomplete, and most agreements lack binding commitments and credible enforcement compared to those in Asia or Latin America.[15]

Furthermore, utilization of trade preferences remains low across Africa, not from lack of interest, but due to complex rules of origin and burdensome documentation that small firms struggle to meet. Services trade faces even greater constraints, with restrictions to licensing, qualification recognition, and professional mobility. Key sectors like logistics, finance, and digital trade are also fragmented by regulatory barriers, limiting scale and integration. Despite growth in digital services, few countries support cross-border data flows or digital contract recognition. Deeper integration could boost intra-African trade by up to 109%, versus just 16% under shallow agreements.[16]

A rebooted trade architecture should:

- *Simplify and harmonize rules of origin* across RECs and the AfCFTA. Adopt flexible rules, enable self-certification, and provide capacity support for firms to comply.
- *Deepen services liberalization*, especially in transport, logistics, digital trade, and professional services, focusing on regulatory convergence, not just tariff schedules.
- *Strengthen dispute resolution and enforcement.* Trade agreements need credible mechanisms to resolve conflicts, ensure compliance, and build trust among firms and states.
- *Make existing agreements work for firms.* Embed firm-facing mechanisms, such as one-stop desks, online portals, and customs interoperability, into AfCFTA implementation.
- *Use the RECs and AfCFTA Secretariat strategically.* Go beyond negotiations to support implementation, monitor performance, and build capacity that ensures real economic outcomes.

With this architecture, agreements become tools for real economic integration, empowering firms to scale across borders and transforming treaties from symbolic commitments into engines of continental growth.

14 Ngwu, Franklin, and Kalu Ojah. "Intra-Africa trade and the need to rethink the neo-liberal approach." *Transnational Corporations Review* 16, no. 4 (2024): 200090.

15 Kassa et al., *Integrating Africa: From Threads to Hubs.*

16 Kassa et al., *Integrating Africa: From Threads to Hubs.*

Delivering regional public goods: The missing lever

Regional integration cannot thrive on trade and markets alone—the provision of regional public goods (RPGs): infrastructure, energy systems, peace and security, and data governance, is necessary. These goods are the connective tissue of integration: lowering trade costs, enabling scale, and de-risking cross border investment. Yet Africa chronically underinvests in them. Consider energy: 17 countries in Africa rely on electricity imports, but regional power pools remain underutilized due to weak regional governance and financing bottlenecks. Security follows a similar pattern: Regional spillovers from conflict (e.g., Sudan, eastern DRC) continue to disrupt trade and mobility, yet regional enforcement remains weak. The African Union's Peace Fund is underfunded and its mandates often lack binding authority, limiting its ability to respond decisively.

Africa's institutional architecture—the African Union (AU), RECs, and emerging plurilateral coalitions—must evolve from coordination to delivery. This means: (i) giving the AU and RECs enforcement authority in RPG domains, (ii) empowering anchor countries to lead, and (iii) creating scalable platforms for project preparation and pooled financing. RECs and the AfCFTA can serve as a delivery platform for RPGs through corridor governance, customs harmonization, and shared standards. But this requires a paradigm shift: Integration is not just about tariffs and trade, but about collective action, where no country can succeed alone. RPGs are not side issues; they are prerequisites for a functional single market.

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Conclusion: From agreement to implementation

Africa's regional integration efforts stand at a pivotal moment. The AfCFTA has established the legal and institutional groundwork, but implementation remains thin, fragmented, and overly focused on tariffs. To deliver jobs, resilience, and structural change, the agenda must now pivot to functionality and implementation. This means building regional production networks by aligning industrial policy with existing demand and potential production capabilities. It means removing regulatory and logistical frictions that raise trade costs even where formal barriers like tariffs are low. It means deepening trade agreements, making them enforceable and linked to investment, services, and digital governance. And it means turning regional public goods—energy, infrastructure, peace, and data—from aspirational into operational realities. Functional integration is more than just a trade agenda, it is Africa's primary strategy for jobs, resilience, and long-term growth.

Navigating uncertainty: Africa's trade prospects with the U.S.

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Introduction

The announcement of the application of high tariffs on U.S. imports in April 2025 generated a considerable amount of anxiety and concern among policymakers and exporters across the world, especially on the African continent. This alarm was compounded by the widespread perception that the United States remains one of Africa's main export markets. Several recent studies have indeed been warning of a large-scale reduction in Africa's exports to the U.S.—with particularly sharp declines in Africa's clothing exports.[2]

But are these concerns warranted? Judging from recent U.S. import data, the answer is probably no (see Figure 27). For instance, this year, exports from Eastern Africa to the U.S. were up to where they were in 2024. In the case of Kenya—a major clothing exporter in the region—its exports to the U.S. increased 22% between April-July 2025, compared with the same period the previous year, reaching a three-year high.[3] Despite having been suspended from the African Growth and Opportunity Act (AGOA) in 2022, neighboring Ethiopia experienced an even greater jump in its exports, with a 95% increase.[4]

It is true that some countries' exports have fared poorly since the tariff announcements—most notably, South Africa, which in the face of a 30% tariff rate has experienced a drop in exports to the U.S.[5] But even for South Africa, while automobile exports have declined, agricultural exports to the U.S. have been strong, rising by 26% in the second quarter of 2025.[6] Moreover, not all cases of Africa's

1 The views expressed here are those of the author and do not necessarily reflect those of the United Nations.

2 U.N. Conference on Trade and Development (UNCTAD), *Tariff Disruptions: The Impact on Least Developed Countries* (2025).

3 Kenya National Bureau of Statistics, *Leading Economic Indicators* (2025).

4 U.N. Economic Commission for Africa, *Eastern Africa Defies Global Trade Headwinds with Resilient Export Growth*, September 29, 2025.

5 "South African Car Exports to U.S. Plunge as Trump Tariffs Bite," *Reuters*, July 14, 2025.

6 Yogashen Pillay, "South Africa's Agricultural Exports to the US Surge despite Looming Tariffs," *Cape Times*, August 19, 2025.

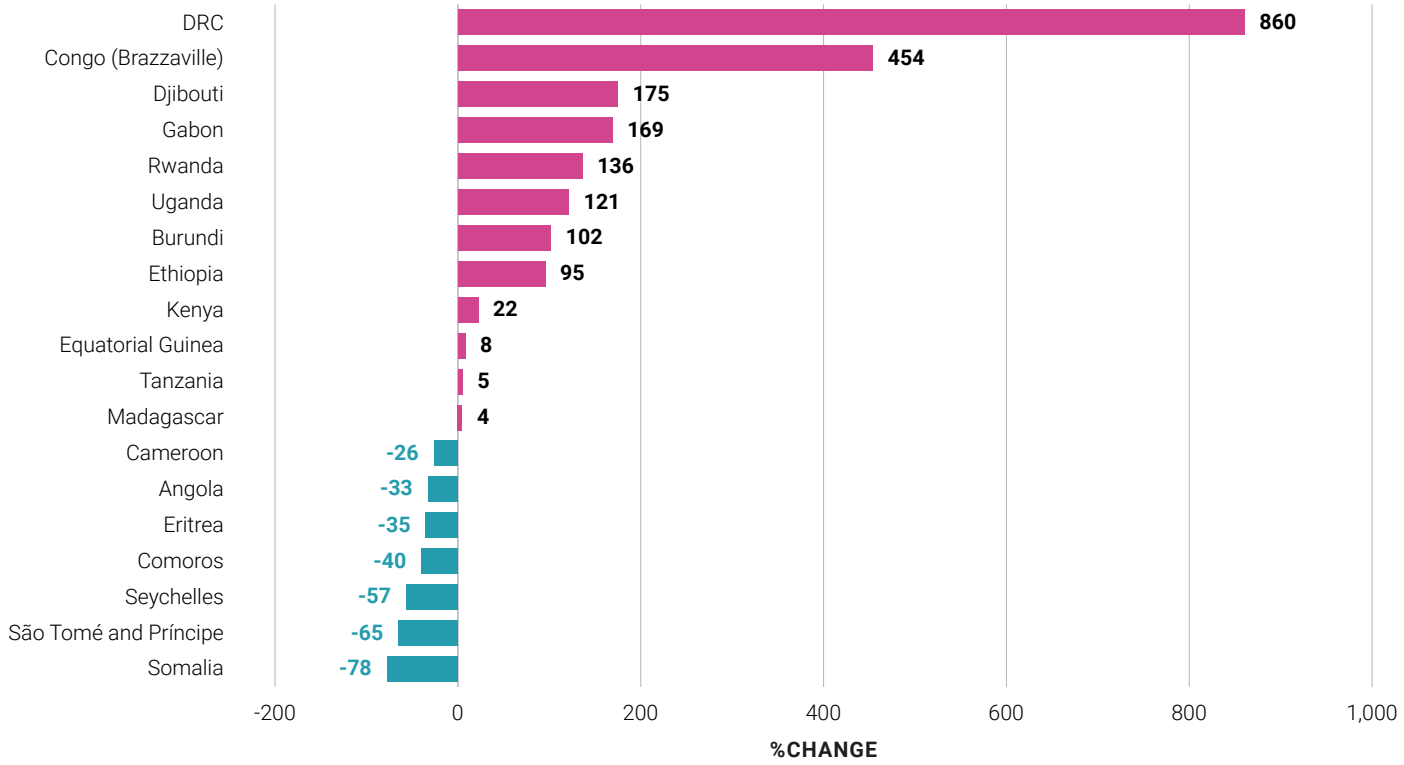
export decline have been related to the tariffs (for instance, in 2025 Angola saw a slump in its oil production, which reduced its export earnings).[7] For the continent in aggregate, between April and July, U.S. imports from Africa increased by 6.5% year-on-year, and rose by an impressive 23.9% for the year from January-July.[8]

What is going on, and why do the initial fears appear misplaced? The first thing to stress is that although the tariffs were announced in April 2025, there was a stay of execution, and tariffs were not actually imposed by the U.S. administration until August. For the 32 sub-Saharan Africa beneficiaries of AGOA, they could also continue to ship goods under AGOA tariff preferences (although this no longer applied after September 30, 2025, when AGOA expired).[9]

FIGURE 27

Exports of African countries to the United States April-July 2025 vs. same period 2024

For most African countries. exports to the United States have increased in the past year



Note: Countries with less than 100 million USD in trade not listed.

Source: U.S. Census Bureau. "USA Trade Online". accessed September 15. 2025. https://usatrade.census.gov/index.php?do=login

7 Candido Mendes, "Angola Production Dips below Million-Barrel Level for First Time Post-OPEC," *World Oil*, August 21, 2025.

8 Computed from trade data available from the United States Census Bureau, downloaded 15th September 2025. It should be noted that the numbers are not currently being updated due to the closure of the federal government between 1st October and 12th November.

9 Exports of the AGOA beneficiary countries had actually increased by 26% in the year to August 2025, vis-à-vis the same period in 2024, according to data from the U.S. International Trade Commission (accessed 23rd November 2025).

It is entirely possible that the negative impact of the new tariffs has yet to materialize and will emerge later in the year. We cannot discount this scenario (delays to release of U.S. trade statistics, caused by the federal government shutdown, obscure a fuller picture).[10] If this is the case, then the rise in Africa's exports may simply reflect a rush by U.S. importers to stockpile inventory ahead of tariff implementation. But something more significant may be at play, too.

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A dramatic shift in global trade

The reality is that U.S. tariffs have affected all and sundry. Some of the world's leading trading nations have been hit particularly hard—for instance, at the height of the bilateral dispute between China and the U.S., the tariff to be imposed on Chinese imports reached over 140%, though subsequent negotiations brought that down to a trade weighted average of 36%.[11]As a result of all this uncertainty, Chinese exports to the U.S. were down by over 25% in October compared to 2024.[12]

The new U.S. tariffs are thus provoking a rapid reorientation in global trade flows as countries try to redirect their exports to other markets, much as economic theory would predict it would.[13] And therein lies the principal reason why Africa should not be excessively alarmed: Other regions have had to confront much higher tariffs than those applied on most African exports.

Take again the example of the clothing sector. The leading suppliers of clothing to the U.S. market are China, Bangladesh, and Vietnam—all of which have been hit by much higher tariffs than those imposed on African clothing exporters.[14] Those three countries alone supply $45 billion of clothing to the U.S. each year, equivalent to about half of total imports. If you are a U.S. retailer like Walmart, where are you going to source supplies of clothing going forward? Paradoxically, in a situation where the world's largest importer has applied tariffs indiscriminatingly on its trading partners, some African sectors might end up benefiting from increased orders, as U.S. firms look for alternative sources of supply.

The U.S. will still need the region's commodities

A final factor to consider is that direct exposure to the U.S. market remains limited for most African countries. Despite AGOA having been in place for a quarter of century, the share of African exports headed for the U.S. market has declined from a peak of 19% in 2007 to around 5% today (see Figure 28). Moreover, any export growth

10 Myles McCormick and Ian Hodgson, "US Economic Outlook Obscured by Shutdown-Triggered Data Gap," *Financial Times*, November 15, 2025.

11 World Trade Organization, "United States of America Imports from China, All Products," Simple average tariff rate (in percent), WTO-IMF Tariff Tracker, December 1, 2025; Joshua P. Meltzer and Dozie Ezi-Ashi, "Tracking Trump's Tariffs and Other Trade Actions," December 2, 2025.

12 Joe Cash and Ethan Wang, "China's Exports Suffer Worst Downturn since Feb as Tariffs Hammer US Demand," *Reuters*, November 7, 2025; Anniek Bao, "China's Exports Unexpectedly Contract in October as Shipments to U.S. Drop 25%," CNBC, November 6, 2025.

13 Sherman Robinson and Karen Thierfelder, "US International Trade Policy: Scenarios of Protectionism and Trade Wars," *Journal of Policy Modeling* 46, no. 4 (2024): 723–39.

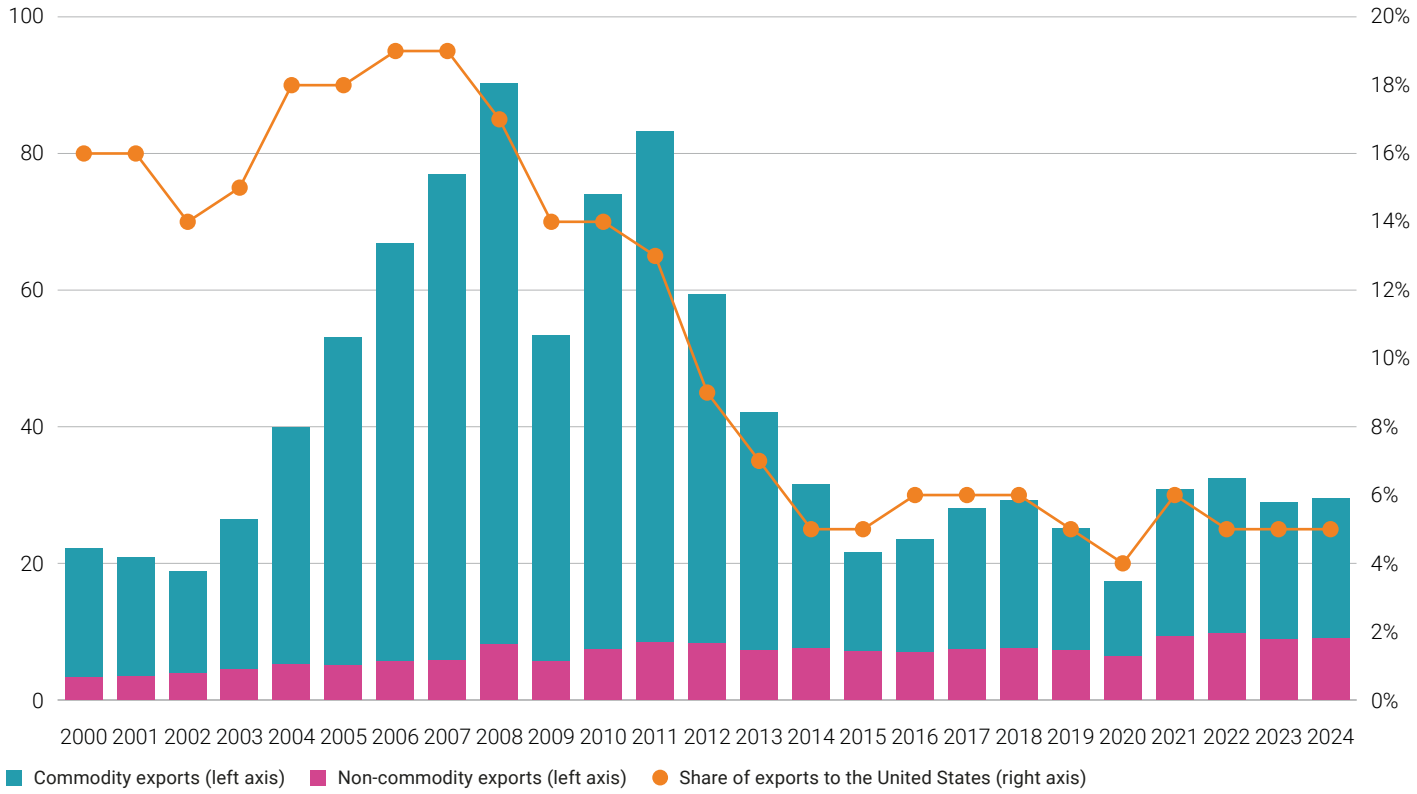
14 Tariffs for China, Bangladesh and Vietnam were initially announced at 35%, 20% and 20%, respectively. See WTO-IMF Tariff Tracker, Accessed December 5, 2025.

that has materialized has tended to be highly concentrated in natural resources. Outside of the clothing sector and a few niche sectors (e.g. South Africa's automotive components and finished vehicles), existing evidence suggests that AGOA has encouraged little economic diversification of Africa's exports.[15]

FIGURE 28

Total African exports to the United States 2000-2024 (billions of USD)

The share of African exports headed for the U.S. has declined from its peak in the mid-2000s



Source: U.N. Trade and Development, 2025

Against this backdrop, there is an important *a priori* reason for Africa not to be excessively alarmed by the new tariffs, given that the vast bulk (70%) of U.S. imports from the continent still comprise of raw commodities.[17] Since China has started to restrict access to its rare earth metals, the U.S. needs African minerals more than ever. Proof of this is that the largest "winner" from the new American trade policy is the Democratic Republic of the Congo: Its mineral exports have surged since April 2025, rising by a massive 860% compared to the same period last year (Figure 27).[18] In another sign of things to come, the American company Energy Fuels plans to invest more than $700 million to exploit a deposit of rare earth metals in the

15 Michael H. Gary and Hugh Grant-Chapman, "What's Next for AGOA," *Center for Strategic & International Studies*, November 6, 2025.

16 United Nations Trade and Development Data Hub, "Merchandise Trade Matrix, Annual (Analytical)," UNCTAD Data Hub, October 15, 2025.

17 United Nations Trade and Development Data Hub, "Merchandise Trade Matrix, Annual (Analytical)."

18 United States Census Bureau, "General Customs Import Value."

southwest of Madagascar.[19] Such demand is only likely to increase over time, as the strategic importance of access to minerals grows.[20] (For more on the economic potential of Africa's critical minerals, see page 48.)

What of future trading relations?

None of the aforementioned is intended to downplay the significant adjustment costs that some African economies—e.g., South Africa and Lesotho, which have built export industries around preferential access to the U.S. market[21]—are likely to face on account of the U.S. tariffs and expiration of AGOA. However, the unpredictability of the tariffs—both in their scope and implementation—should serve as a warning to Africa's policymakers and business leaders alike. What is granted today can be withdrawn tomorrow, as we have seen in the past with suspensions of countries from AGOA.[22] Consequently, few investors are prepared make long-term decisions based solely on current U.S. market access conditions. The risks are simply too high.

The same is unfortunately true for preferential trading arrangements with other trading partners. For instance, despite offering preferential market access to African countries since the Lomé Convention of the 1970s, the European Union (EU) has frequently applied non-tariff barriers on African imports, including strict phytosanitary standards and strong rules of origin requirements.[23] More recently, the EU has unilaterally imposed new trading rules related to carbon emissions and deforestation. A consequence has been a gradual decline of the EU as an export destination for the region. In eastern Africa, the EU now accounts for less than 10% of regional exports, compared with around one-third of all exports three decades ago.[24]

All this suggests the need for a new strategic approach. Africa should double down on regional integration efforts. The African Continental Free Trade Area (AfCFTA) offers a more stable and predictable framework for trade. Reciprocal market access under AfCFTA is binding and intra-African trade is currently the fastest-growing export market for the region.[25] By leveraging this momentum, countries can upgrade value chains, reduce exposure to external shocks, and foster their industrial development. In short, while the U.S. market, like the EU, may continue to offer episodic opportunities, the future of African trade lies closer to home.

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19 Emre Sari, "États-Unis – Chine : Le Duel Des Minerais Arrive à Madagascar," *Jeune Afrique,* November 14, 2025.

20 Ede Ijjasz-Vasquez et al., *Leveraging US-Africa Critical Mineral Opportunities: Strategies for Success* (Africa Growth Initiative at Brookings, 2025).

21 One estimate is 86,000 people have jobs in the South Africa's auto sector thanks to AGOA, with another 125,000 people employed in related jobs as subcontractors or suppliers. Source: AFP, "Trump Threats to SA Rattle Carmakers as AGOA Decision Nears," The South African, February 13, 2025.

22 Gary and Grant-Chapman, "What's Next for AGOA."

23 Andrew Mold, *Non-Tariff Barriers – Their Prevalence and Relevance for African Countries*, No. 25, African Trade Policy Centre (Economic Commission for Africa, 2005).

24 United Nations Trade and Development Data Hub, "Merchandise Trade Matrix, Annual (Analytical)."

25 U.N. Economic Commission for Africa, *Eastern Africa's Trade Resilience and Regional Integration in Focus at ICSOE 2025*, October 3, 2025.

Why Africa should sequence, not rush into AI

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At a small community hospital in Gabon, the patient register is still handwritten. Nurses flip through paper ledgers, sometimes misplacing entire patient histories. The contrast with global headlines about artificial intelligence (AI) could not be starker. While the world debates how generative AI will transform industries and accelerate global growth, many African economies remain stuck in paper-based systems that constrain productivity, inclusion, and competitiveness.

The greatest risk is not missing the AI revolution, but joining it too early.

Across the continent, internet penetration stands at 38%, far below the global average of 68%.[1] According to the Africa Data Centres Association and the World Economic Forum, Africa accounts for less than 1% of global data center capacity—and far less of the GPU infrastructure that powers AI.[2] The continent produces under 1% of global AI research output and faces significant energy constraints for AI computing.[3] This divide is not merely technological; it is a divide in opportunity, productivity, and participation in the emerging intelligence economy.

This paradox underscores Africa's central challenge: The greatest risk is not missing the AI revolution, but joining it too early. Just as many countries once industrialized prematurely—importing factories before developing skilled labor, supply chains, and domestic markets—Africa now risks premature automation: Adopting AI technologies before building the digital foundations to harness them productively.

History offers cautionary lessons. Ghana's rapid state-led industrialization in the 1950s and 1960s—marked by ambitious factories and major hydroelectric investments—ultimately faltered because these industries had weak domestic linkages and depended heavily on imported inputs.[4] Ricardo Hausmann's work on economic complexity reminds us that countries grow by accumulating productive

1 International Telecommunications Union, *Measuring Digital Development: Facts and Figures 2024* (ITUPublications, 2024), 2.

2 Alexander Tsado and Robin Miller, "Africa's AI Moment: How Coordinated Investment in 'green' Computing Can Unlock $1.5 Trillion," *World Economic Forum*, December 3, 2025.

3 "AI and Africa: The Unexplored Frontier of Innovation and Inclusivity," *T20 South Africa*, July 21, 2025.

4 Beth S. Rabinowitz, "An Urban Strategy Unravels – Kwame Nkrumah 1957–1966," in *Coups, Rivals, and the Modern State: Why Rural Coalitions Matter in Sub-Saharan Africa*, 1st ed. (Cambridge University Press, 2018).

capabilities—skills, institutions, and interconnected sectors that enable more sophisticated production.[5] AI can accelerate this trajectory, but only if it is layered onto economies already building those underlying capabilities. Dani Rodrik's idea of premature deindustrialization reinforces this warning: Globalization and labor-saving technologies have narrowed the traditional industrialization ladder, eroding the employment and capability-building benefits Africa cannot afford to lose.[6]

The risk of a digital dependency cycle

In advanced economies, AI complements aging and high-cost workforces. In Africa, it could undercut the continent's greatest asset: Its young and cost-competitive labor force. With nearly 12 million Africans entering the job market each year but only about 3 million formal jobs being created,[7] unemployment and underemployment remain structural.

If deployed hastily, AI could displace workers in key sectors—such as call centers in Kenya and Rwanda, logistics operations in South Africa, or financial back-office services in Nigeria—before alternative employment opportunities emerge. Without sequencing, automation could deepen social vulnerability and instability.

Proponents argue that Africa cannot afford to wait. Indeed, AI holds immense promise for agriculture (precision mapping of yields), health care (diagnostic imaging and disease surveillance), and education (personalized learning tools). Yet the question is not whether to adopt AI, but how—and when.

Without sequencing, Africa risks becoming the world's raw data mine—exporting information, importing algorithms, and capturing little of the value. The echo with history is sobering: once raw minerals, now raw data. The danger is a digital dependency cycle, where AI models, platforms, and governance systems are designed elsewhere, while Africa remains a consumer rather than a producer in the digital economy. The result would be a replay of extractive development—only this time, in code.

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A sequencing strategy for AI

Africa's late-mover status is not a disadvantage if used wisely. By sequencing deliberately, countries can design guardrails before diffusion accelerates—avoiding the mistakes advanced economies are now scrambling to correct. Four priorities stand out:

5 Ricardo Hausmann et al., *The Atlas of Economic Complexity: Mapping Paths to Prosperity* (The MIT Press, 2014).

6 Dani Rodrik, "Premature Deindustrialization," *Journal of Economic Growth* 21, no. 1 (2016): 1–33.

7 African Development Bank Group, *Jobs for Youth in Africa: Strategy for Creating 25 Million Jobs and Equipping 50 Million Youth 2016-2025* (2016).

1. Rule the data or be ruled by it

Data governance is now industrial policy. Regulatory frameworks must mandate digitization, interoperability, and data sovereignty. Interoperability is not just efficiency—it is power. When governments and local firms own, analyze, and control data, they shape the AI economy rather than surrender it. Gabon's directive on digitalization[8], Rwanda's National Data Strategy,[9] and Ghana's Digital Economy Policy[10] are early steps toward this sovereignty.

2. Invest in digital foundations

Digital public infrastructure—payments, digital IDs, e-signatures, and local data centers—is today's equivalent of roads and power grids. In Gabon, linking small enterprises to regional payment rails like GIMACPAY[11] expands market access while generating structured datasets essential for AI. In Kenya, the combination of M-Pesa mobile payments and digital IDs has created a data ecosystem that now underpins fintech innovation. Without these building blocks, AI will remain a promise without a platform. (For more on leveraging AI to improve payment systems, see page 122.)

3. Regulate the pace of change

AI must be introduced at a pace economies can absorb—tested in sandboxes, piloted, and refined through feedback loops. In Gabon, a forthcoming Start-up and Digital Enterprise Act could create such pathways for innovation while keeping guardrails in place. This approach ensures that AI systems are trained on local data, refined by local feedback, and deployed for local needs—without destabilizing markets or displacing jobs prematurely.

4. Turn late-mover status into first-mover advantage

Africa can lead where others faltered. Brazil's Pix shows how a latecomer can set global benchmarks in digital payments, now serving over 160 million users.[12]Likewise, South Africa's Artificial Intelligence Institute, co-led by the University of Johannesburg, is pioneering governance models that balance innovation with sovereignty and inclusion[13]—something aging economies with entrenched systems struggle to achieve.

Getting the sequencing right

AI is not a disruption to resist, but a transformation to prepare for and shape. If unregulated, it could become Africa's premature automation trap—deepening unemployment, dependency, and inequality. Given the region's rapidly growing population and the millions of youths entering the labor force each year in search of jobs, the margin for error is thin.

AI is not a disruption to resist, but a transformation to prepare for and shape.

8 Portant Réglementation de La Digitalisation En République Gabonaise, Ordonnance N° 0006/PR/2025 (2025).

9 Republic of Rwanda, *The National Data Sharing Policy* (Ministry of ICT and Innovation, 2025).

10 Republic of Ghana, *Ghana Digital Economy Policy and Strategy* (Ministry of Communications and Digitalisation, 2024).

11 GIMACPAY is a regional payment switch operated by the Central Bank of Central African States

12 Martins, Laura. "U.S. Targets Brazil's Payments Platform Pix in Trade Spat." *Rest of World*, July 31, 2025.

13 "Launch of the Artificial Intelligence (AI) Institute of South Africa and AI Hubs (University of Johannesburg and Tshwane University of Technology)," *OECD AI*, July 9, 2025.

But sequenced wisely—anchored in infrastructure, regulation, ecosystems, and regional coordination—AI can unlock productivity, expand services, and accelerate Africa's structural transformation. The path forward is not about slowing innovation, but about synchronizing it with Africa's development goals.

Africa does not need to win a race it never signed up for. It needs to chart its own course: digitize before automating, secure data before exporting it, build capacity before importing platforms. This is not delay—it is strategy.

The lesson from Gabon is clear: When sequencing is right, digital foundations create transformative value and prepare systems for responsible automation. Done in this order, Africa can bridge the AI gap on its own terms—turning late entry into durable advantage while navigating the geopolitics of the emerging intelligence economy. This matters profoundly, because the global AI landscape is increasingly shaped by U.S.–China competition over data, chips, standards, and cloud infrastructure. Sequencing becomes a tool of sovereignty, enabling African countries to adopt AI on strategic terms, engage globally, and shape technology according to their own development priorities rather than absorbing systems designed elsewhere.

In the age of AI, sequencing—not speed—is Africa's greatest competitive edge and the key to turning technological promise into shared prosperity.

How tokenization can accelerate financing of small and medium enterprises in Africa

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In 2025, artificial intelligence (AI) dominated the news, with the global community divided about its impact on jobs. However, the untold story of AI is its impact on payment systems and liquidity—especially for small and medium enterprises (SMEs). AI-based tokenization could substantially improve access to finance, payments, and liquidity for SMEs.

SMEs are the backbone of Africa's private sector, representing 90% of all firms.[1] In Nigeria, SMEs account for 60-70%[2] of employment and nearly 50%[3] of GDP. However, Africa in general faces an estimated SME financing gap of over $331 billion.[4] Moreover, despite their importance, public sector arrears condemn SMEs to finance the government at their own expense and sometimes to their own demise.[5] AI and tokenization could help remedy this.

What is tokenization, and how does it work?

Tokenization means creating digital representations of traditional assets via the blockchain so they can be traded, tracked, and managed more easily.[6] The issuance, recording, and transfer of tokens depend on the applications executed on

1 MIT Sloan, "Responsibly Financing Africa's Missing Middle" MIT Sloan, November 12, 2024.

2 Uju Victoria Okoli and Ifeoma Rita Ezedebego, "Small and Medium Scale Enterprises and Economic Growth in Nigeria," International Journal of Research and Innovation in Applied Science X, no. IV (January 1, 2025): 596-610.

3 Deborah Oluwadunmininu Oluremi and Owen Affor Maku, "Small and Medium Scale Enterprises and Nigeria Economic Growth," International Journal of Small Business and Entrepreneurship Research 12, no. 5 (May 15, 2024): 71-89.

4 Alexander Raia, "Responsibly Financing Africa's Missing Middle," MIT Sloan School of Management, November 12, 2024.

5 International Monetary Fund. "Domestic Arrears in Sub-Saharan Africa: Causes, Symptoms, and Cures." In "Regional Economic Outlook: Sub-Saharan Africa," October 2019, 42-52. Washington, D.C.: International Monetary Fund, 2019.

6 "What Is 'Tokenization'? How Does It Make Investing Easier?," World Economic Forum, n.d.

programmable platforms according to the Bank for International Settlements (BIS).[7] By creating provably unique digital tokens that can be issued, stored, and traded on these ledgers, tokenization enables the exchange of information and value. A "token," in this context, represents something of value that can be legally and operationally exchanged on a programmable ledger.[8] Regulated tokenized assets are traditional financial assets and not crypto assets. With digital tokens, investors can convert real-world assets into digital tokens on a blockchain. This process not only makes it easier to trade and invest but also improves security and transparency because there are independent controls, such as access controls, controls over stability, control over finality, and oversight over anti-money laundering regulations.

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How can tokenization facilitate greater access to liquidity and capital for SMEs?

The plague of unpaid government bills: World Bank survey data[9] indicates that across all regions, firms in sub-Saharan Africa have the highest participation rates in public procurement (22% compared to a global average of 18%). These firms, including SMEs, supply various services to the government (e.g., transportation, courier services, construction, even maintenance and repairs). However, failure by the government to meet its payment obligations constrains growth of these firms. Many SMEs are forced to go into liquidation due to unpaid bills—more formally known as government arrears. In countries like Egypt,[10] Kenya,[11] and Cameroon,[12] arrears clearance has been highlighted as a key issue impeding private sector growth by both the IMF and World Bank. A 2019 IMF study further concluded that average arrears in sub-Saharan Africa were about 3.3% of GDP.[13] The same study estimates that a 1 percentage point increase in the arrears-to-GDP ratio is associated with a 0.3 percentage point decline in real GDP per capita growth—implying that with an average of 3.3 % in arrears, sub-Saharan Africa is giving up almost 1 percentage point of GDP growth.

While SMEs are less likely to participate in public procurement than large firms, they are disproportionately impacted by arrears due to cash and credit constraints. For most SMEs, access to bank lending is constrained or prohibitive due to a lack of consistent and transparent credit history, and/or a lack of registered collateral. In the rare cases where SMEs have access to finance and transact on banking sector platforms, the transaction costs are high, and settlement is slow—it can take over a

7 Bank for International Settlements, "Tokenisation in the Context of Money and Other Assets: Concepts and Implications for Central Banks," Report to the G20 (2024).

8 "Ready Layer 1: A General-Purpose State Machine* for the Financial Sector," Citigroup, December 2, 2024.

9 World Bank. "Evidence on Public Procurement from Firm-Level Surveys: Global Statistics from the World Bank Enterprise Surveys and a Novel Public Procurement Survey Module." Equitable Growth, Finance & Institutions Insight. Washington, D.C.: World Bank, 2023.

10 "Egypt Economic Monitor, December 2021: The Far-Reaching Impact of Government Digitalization," World Bank Group, February 8, 2022; International Monetary Fund, Arab Republic of Egypt 2025 Article IV Consultation, No. 25/186, IMF Country Report (2025).

11 World Bank, Kenya Economic Update, November 2025: Special Focus on Competition Policy (Washington, D.C.: World Bank, 2025).

12 The World Bank, Cameroon's Green Gold: Unlocking the Value of Forests and Natural Capital, Cameroon 2025 Economic Update Fourth Edition (2025).

13 International Monetary Fund. African Dept., Regional Economic Outlook, October 2019, Sub-Saharan Africa, Regional Economic Outlook (International Monetary Fund, 2019).

week for transactions to clear—and the costs of bank accounts are onerous.[14] The lack of capital markets also means SMEs cannot create funding streams by listing on the capital markets.

Technology, and in particular tokenization, can help solve these challenges while at the same time deepening secondary market trading and creating more (and much-needed) liquidity. Concretely, for countries with high domestic arrears, tokenizing arrears gives the SMEs tradable assets. These tokenized assets can enable the development of a secondary market in which the assets are traded—or derivative baskets created—allowing for better price discovery, cost reduction, and access to extra credit lines. For example, a government service provider with a verified invoice can tokenize the claim and sell it to investors or secondary market participants at a discount. This allows the service provider (maybe a restaurant owner or construction company) to access cash (liquidity) immediately, while the new creditor can hold the token until the government can honor the debt. In the secondary market, agents can bundle these receivables into new baskets by lender and resell them.

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Tokenization also enables SMEs to convert future revenue streams into affordable investable equity offerings, thereby allowing SMEs to raise capital.

Moreover, by providing a history of the firms' revenue and payment obligations, tokenization can help SMEs build a credit history that would, in turn, improve their access to credit. For example, when an SME tokenizes its outstanding invoices, the blockchain on which the token is built records the issuance of the invoice, the debtor/service contractor, payment due date, and ultimately payment performance. Likewise, each time the SME pays out an obligation, it gets recorded, and this can count positively towards its credit score. The combination of both transactions across time helps to build the credit history of the SME and the level of credit the SME can manage or needs.

3 recommendations for Africa's successful adoption of tokenization and potential risks

Despite its clear benefits and applicable use cases for Africa, and despite Africa's unique position to leapfrog with this technology, several regulatory and infrastructure conditions must be met. Security concerns, infrastructure gaps, and a lack of common standards impact adoption plans. In Africa, there is also a knowledge gap that must be filled.[15]

Tokenization is one financial innovation race where Africa could position itself to be on par with other emerging markets. Africa has the market and could go to scale much faster. The overall size of transactions on the continent also lends itself to the use of tokenization. To move ahead, three things are the most crucial:

14 Kim Polley, "Cross-Border Payments Are Africa's Quiet Trust Crisis," Medium, December 19, 2025.

15 "Tokenization Moving from Hype to Reality Across Financial Services, Broadridge Report Reveals," Broadridge, October 27, 2025.

- First, a financial jurisdiction should work on a regulatory sandbox (before the launch) to perform simulated transactions. This regulatory sandbox would bring together (or be led by) a regional regulator authority, with asset managers, banks, custodians, a financial infrastructure provider, and exchanges as needed. An example of such a sandbox effort is the Canton Network pilot in Singapore, which brought together 45 institutions over a six-week period to execute and decentralize interoperable transactions in a safe and secure network.[16]
- Second, to enforce regulation and transparency, the Securities and Exchange Commission (or equivalent body) of each country would need to work with the central bank and other relevant regulatory authorities to ensure the right regulation is in place. Regulation could benefit from the support of institutions like Goldman Sachs, the BIS, and others that are testing and/or providing regulatory advice on tokenized development.
- Finally, there is a need for financial literacy education, as well as the development of requisite infrastructure. Here policymakers need development partners (as well as public and private-sector collaboration) to build technical capacity and interoperable ecosystems. For tokenization to deliver results, the region needs a well-managed and developed technology stack building on distributed ledgers, smart contracts, custody systems, anti-money laundering infrastructure, and compliance automation.

Tokenization is one financial innovation race where Africa could position itself to be on par with other emerging markets. Africa has the market and could go to scale much faster.

Despite the significant benefits it could provide, tokenization is not without risk. Authorities, especially securities and exchange commissions and central banks, must be aware of the risks which include deficiencies in data quality and weak governance. These risks could expose countries to financial crime and undermine their anti-money laundering efforts. Without the right regulatory and due diligence frameworks, investors may not be sufficiently protected, leading to fraud and lack of transparency in the markets.

For a continent where SMEs employ the greatest number of people, but also suffer the most from clogged financial plumbing, there is an urgency to find a solution. Tokenization based on AI can provide a solution. Indeed, for Africa's SMEs, artificial intelligence (AI) might be less about destroying jobs, and more about getting paid on time, faster, and more securely.

16 Anutosh Banerjee et al., "From Ripples to Waves: The Transformational Power of Tokenizing Assets," McKinsey & Company, June 20, 2024.